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Matthias Wellhoefer

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KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

OLSEN, LIN B

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,906	<b>Applicant(s)</b> WELHOFER ET AL.	
	<b>Examiner</b> LIN B. OLSEN	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) 9, 10 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 6, 8 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Amendment***

Applicant's explanation of the meaning of the Substitute Specification at page 3 is satisfactory and the objection to the Specification is withdrawn.

The Drawings submitted on February 17, 2009 are accepted. The objection to the drawing has been withdrawn.

The amendments to claim 6 have been entered and the objection and rejection of claim 6 under 35 USC 112 second paragraph have been withdrawn.

***Response to Arguments***

Applicant's arguments filed February 17, 2009 have been fully considered but they are not persuasive. In the specification paragraph [0015] states that the microprocessor and the safety module **analyze** the integrated output of the acceleration sensors independently.

*The sensor signals from sensors S and PAS are analyzed by processor  $\mu$ C and safety module SCON, independently of one another.*

However, once the microprocessor and safety module have reached independent decisions about whether a triggering event has occurred, they act together so that a firing command from the microprocessor will trigger the circuits.

*If safety module SCON recognizes this triggering event it releases output stage module FLIC so that, at a firing command of processor  $\mu$ C, the output stages may be completed and the igniting current may flow into the triggering circuits.*

The specification is silent as to any details of the output stage module FLIC. However, it is known that SCON releases the output stage so that the output of the microprocessor can trigger the circuits.

Applicant has embodied this structure in claim 6 which recites:

*an electronic safety switch that, as a function of a signal of an acceleration sensor system, **enables an output stage independently of the processor**, the processor actuating the output stage as a function of the signal, wherein the safety switch analyzes an integrated acceleration signal as the signal of the acceleration sensor system, wherein the acceleration sensor system includes an integrator for outputting the integrated acceleration signal.*

And has interpreted this recitation as follows:

*As recited in claim 6 of the present application, the electronic safety switch enables an output stage independently of the processor. In contrast, the Examiner explicitly acknowledges that "the comparators (50) enable the gates (60, 61) to act when the outputs of the microcomputer are HIGH." (Office Action, p. 5). Accordingly, the comparator (50) of the Okano '276 reference are clearly dependent upon the output of the microcomputer in enabling the gates (60, 61). Thus, it is respectfully submitted that the comparators (50) are not electronic safety switches that enable an output stage independently of the processor, as recited in claim 6.*

In interpreting Fig. 1 of Okano 1, the Examiner has interpreted the electronic safety switch as being implemented with both comparators 50, the acceleration sensor system as encompassing elements (20A /21A /22A and 20A /21A /22B) and the output module stage as implemented with gates 60 and 61 and output driver (10, 11, 12 and power circuit). The outputs of 22 A and 22B are the integrated value of the acceleration. The outputs of comparators 50 are derived independently of the processing that happens in the microprocessor 24. The outputs of the comparators 50

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enable (or release) the operation of AND/NAND gates 60/61 so the outputs of the microprocessor O<sub>A</sub>, O<sub>B</sub> drive the output circuit. Clearly the outputs of comparators 50 are independent of the processor as recited by the claim and supported by paragraph [0015]. The output stage acts dependent on both the safety switch and the microprocessor as taught in the specification.

On page 5 of the Office Action, Okano 1 elements 22A and 22B are identified as producing the integrated acceleration output and the GE transducer was cited for incorporating it in a package. The GE device was not needed to satisfy the terms of the claim and is not referenced in this action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation that “*an electronic safety switch that, as a function of a signal of an acceleration sensor system, enables an output stage independently of the processor,*” does not distinctly claim the invention as it can be interpreted in at least two ways.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim **6** is rejected under 35 U.S.C. 102b as being anticipated by U.S. Patent No. 5,083,276 to Okano et al. (Okano 1).

Regarding independent **claim 6**, “A control unit for actuating a passenger protection arrangement, comprising:” – As stated at col. 1 lines 6-7 – Okano 1 relates to system for controlling a safety device for a vehicle, such as an air bag and a seat belt holding device. Referring to Fig. 1 of Okano 1, for all components -

“a processor” (24); and

“an electronic safety switch that ( both 50's), as a function of a signal (The output of 22 A and 22 B are a function of the signal out of Amps 21A and 21B) of an acceleration sensor system (The Examiner regards the acceleration sensor system as encompassing elements ( 20A /21A /22A and 20A /21A /22B ) , enables (outputs of the 50's ) an output stage (60, 61) independently of the processor (24), the processor actuating the output stage ( with outputs  $O_A$ ,  $O_B$ ) as a function of the signal (outputs of 21A and 21B fed into  $I_A$  ,  $I_B$ , ) wherein the safety switch (both 50's) analyzes an integrated acceleration signal (integrated in 22A , 22B) as the signal of the acceleration sensor system, wherein the acceleration sensor system includes an integrator for outputting the integrated acceleration signal.”

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim **8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Okano 1 as described above with regard to claim 6 in view of U.S. Patent No. 5,431,441 to Okano (hereafter referred to as Okano 2). Okano 2 is concerned with a system for controlling a safety device for a vehicle.

Regarding **claim 8**, which is dependent on Claim 6, further comprising:  
"a high pass filter for filtering the integrated acceleration signal." – Okano 1 does not show filtering the acceleration signal. However, Okano 2 shows in Figs 1 and 4 utilizing a high frequency band pass filter(9) to feed an integrator (10) for making the collision judgment. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the prior art elements of Okano 2 used in a safety device art according to known methods to yield improved collision detection.

Claim **11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Okano 1 as described above with regard to claim 6 in view of U.S. Patent No. 5,351,185 to Takeuchi et al (Takenuchi). Takenuchi is concerned with a system for controlling a safety device for a vehicle that checks for malfunction of the unit.

Regarding **claim 11**, which is dependent on Claim 6, "wherein the safety switch executes watchdog functions for the processor." - Okano 1 does not mention a watchdog timer. However, Takenuchi at col. 1 lines 33-35 relates that it is well known

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that a control system of the safety device type requires various kinds of failure judgments. Further Takenuchi shows how a watchdog would be connected to the microprocessor. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the known watchdog techniques to improve the Okano 1 device in the same way Takenuchi works.

### **Withdrawn Claims**

Claims 9, 10 and 12 are withdrawn but not cancelled.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIN B. OLSEN whose telephone number is (571)272-9754. The examiner can normally be reached on Mon - Fri, 8:30 -5.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin B Olsen/  
Examiner, Art Unit 3661

/Thomas G. Black/  
Supervisory Patent Examiner, Art Unit 3661